UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Ecological Site Description

Site name: ARID SOUTHWESTERN
Site number: R-273ZY012PR
Major Land Resource Area: 273 Semiarid Coastal Plains
Interstate correlation: NONE

Physiographic features: Elevation of this site ranges from sea level to 400m. Most of the area is nearly level to gently slopping. Elevation increases gradually from the beaches on the Caribbean Sea to the foothills of the semiarid mountains to the north. Limestone ridges are similar to those in the Humid Coastal Plains but they lack the striking karst features. All drainage is superficial and flows in a southerly direction.

Climatic features
Frost-free period: 365 DAYS
Freeze-free period: 365 DAYS
Mean annual precipitation: 30 inches
Mean annual air temperature: 79ºF
Mean annual soil temperature:
Monthly moisture and temperature distribution:

	Mean Precipitation (inches)	**Percent Precipitation (%)**	**Mean Temperature (ºF)**
January	.79	2.63	76
February	1.42	5.73	76
March	1.28	4.26	77
April	1.82	6.06	78
May	3.58	11.93	80
June	2.25	7.50	81
July	2.00	6.66	82
August	3.06	10.20	82
September	4.62	15.33	81
October	4.26	14.20	81
November	3.84	12.80	79
December	1.42	4.73	77
Mean annual	**30**		**79ºF**

Other climatic features: A rainy season prevails from July to November and a pronounced dry season occurs during the remainder of the year. Hurricanes are most

likely to occur from August through November, and are characterized by strong winds and torrential rains. Surface water is scarce because of limited rainfall and high evaporation rates. Low rainfall and steep topography of the adjacent semiarid mountains to the north provide little additional surface water.

Associated water features: Streams and rivers generally are intermittent. In places artesian pressure brings saline and sodic ground water to the surface.

Elevation Aspect: 10 to 500 ft.

Percent Slope: 0 to 10

Soils: Soils of this site are deep, excessively drained, sandy, acid, and occur on nearly level to gently sloping. The available water holding capacity is low.

Major Soil Taxonomic Units correlated to this site include:

Sosa, SoA, SsB, SsD2
Bahía (Americus), AsB
Guayabo, Gf

Plant communities:

This site consists primarily of tufted perennial grasses and grasslikes that are tolerant to high water table and saline conditions. Plant community consists of scanty vegetation that is salt tolerant. The site exists on the margins of salt flats and along the sandy beaches fringing the seashore. Grasses constitute approximately 61% of the composition, mainly xerophytic forbs 28%, shrubs make 10% and trees 1%.

Major plant species composition

Some introduced grass species are adapted to this site. These highly palatable species include guinea and buffel grass. They may exist in varying levels of dominance due to past or existing grazing pressure.

GRASSES AND GRASSLIKES

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For Group
ARCH	Chaese Trees Awn	1			
BRSU	Gramita	1			
CEEC	Souther sandbur	1			
CEIN4	Sandbur	1			
CHIN4	Mexican bluegrass	1			
CYDA	Bermuda grass	1			

DAAE	Egyptian grass	1			
SPPY2	Matojo de piramide	1			

FORBS

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For group
BAMA5	Saltwood	2			
BUOB	Lechecillo	2			
HECU3	Heliotrope	2			
HEGU2	Nuececilla	2			
JAGO	Tautaba	2			
LAIN2	Wild sage	2			
OPBO	Tuna catus	2			
PHVE	Saltweed	2			
PORE2	Suchers	2			
SEPO2	Sea purslane	2			
SIAG	Horseweed	2			

Shrubs and Trees

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For group
ACFA	Sweet acacia	4			
BUBU	Black olive	4			
COAN11	Basora	4			
DAEX	Candlewood	4			
ELSI9	Turpentine	4			
MAGN	Sea tea	4			
PIUN	Catclaw blackbead	3			
PRJU	Mesquite	4			
SUMA2	Quitaran	4			
SWMA	Caoba dominicana	4			
TAIN	Tamarind	4			

Ground Cover and Structure

Height Above the Ground					
Not applicable	6 to 12 inches	12 to 24 inches	24 to 60 inches	60 to 80 inches	180 to 240 inches

	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover
Trees												
Shrubs							1	5				
Grasses and grasslikes					10	70						
Forbs			5	20								
Cryptogams												
Coarse fragments												
Bare ground												
Litter												

Transition Pathways:

As native grasses are removed from the plant community, they are replaced by mexican bluegrass, bermuda grass and pyramid dropseed. As these grasses are removed from the site some forbs such as salt worth and other salt tolerant grasses such as hurricane grass and sandbur, and salt tolerant forbs and shrubs such as salt plant, barilla and tuna cactus increase. Mesquite and sweet acacia also increase as the grass component of the plant community is reduced.

Total annual production: 800 to 1300 lbs/acre

Plant Growth Curves

Growth curve number: PR001
Growth curve name: PR PLANT GROWTH CURVE
Growth curve description: Native and naturalized grasslands.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
6	5	4	7	12	10	9	10	11	10	9	7

Animal Community:

This site is important for several wildlife species. Major species using the site include:

Antillean euphoina
Antillian mongo hummingbird
Balckfaced grassquit
Bananaquit
Bank swallow
Caribbean elaenia
Cattle egret
Cave swallow
Common ground dove

Common yellowthroat
Gray kingbird
Great blueheron
Greater yellowleg
Helmeted guinea fowl
Killdeer
Least grebe
Least sandpiper
Lesser antillean pewee
Morning mockingbird
Puertorican flycatcher
Puertorican vireo
Shiny cowbird
Turkey vultre
Western sandpiper
Yellowfaced grassquit
Zenaida dove
Lizards

Associated sites:

Similar sites
Plant communities, production, and vigor of this site is not similar enough to other sites in the region to cause a problem or concern.

Site documentation

Author: M. Montes, E. Más
Revised: 05/2002 E. Más, J. Lugo, S. Ríos

Supporting data for site development: Supporting data include clipping studies, and historical writing of the area. More documentation and study are needed to fully understand this site and the transitions that occur.

Sampling techniques
SCS-Range 417

Type locality: Combate Beach Area, Cabo Rojo, PR

Field Offices: Ponce, San Germán

References:

USDA, NRCS. 1997. National Range and Pasture Handbook.

USDA, SCS.

Site Approval:
This site has been reviewed and approved for use:

USDA NRCS Resource Conservationist Date